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(54) Title: EPOXY RESIN CURING AGENT FOR ENHANCED WEAR RESISTANCE AND WEATHERABILITY OF CURED MATERIALS

(57) Abstract: Hardener for curing of epoxy resins which produces materials with high abrasion resistance, photostability and chemical resistance. The hardener comprises a sol prepared by controlled hydrolysis and condensation of compounds of the type: (X-B-)_n Si(-Y)_{4-n} where n = 1 or 2, X = SH, -N=C=O, or NR₁R₂, R₁, R₂ being chosen from hydrogen, saturated or unsaturated C₁-C₁₈-alkyl, substituted or non-substituted aryl, formyl, aliphatic or aromatic carbonyl, carbamoyl, sulphonyl, sulphonyl, phosphonyl, sulphinyl, phosphinyl, while the carbon chains of said compounds may include one or more of the elements oxygen, nitrogen, sulphur, phosphorus, silicon and boron, and/or may include one or more hydrolysable silane units, or R₁, R₂ are chosen from condensation products or addition products of one or more types of chemical compounds such as acids, alcohols, phenols, amines, aldehydes or epoxides. B is a spacing group chosen from saturated or unsaturated C₁-C₁₈-alkylene, substituted or nonsubstituted arylene, while the carbon chains of the stated compounds may optionally include one or more of the elements oxygen, nitrogen, sulphur, phosphorus, silicon and boron. Y is chosen from hydrolysable groups such as alkoxy, carboxyl, and halogen.

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